

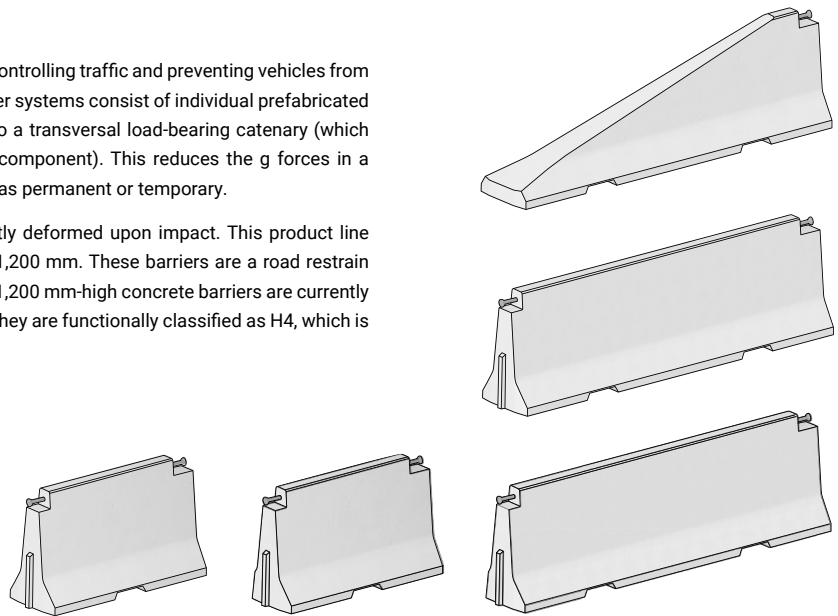
TECHNICAL LIST (HS02/HS03)

ROAD BARRIER 120

Technical Product Data:

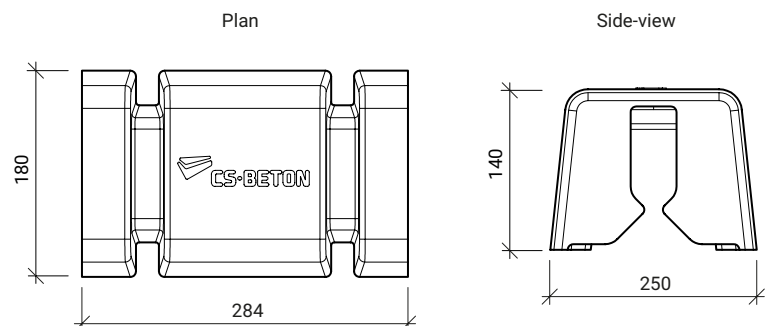
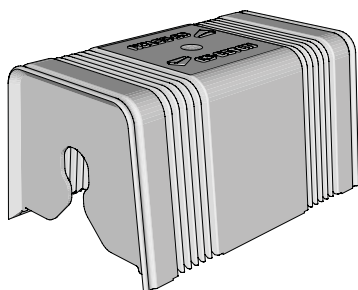
Our road barriers are a modern and highly efficient way of controlling traffic and preventing vehicles from entering the opposite lanes, or leaving the road. Road barrier systems consist of individual prefabricated components, connected by patented articulated joints into a transversal load-bearing catenary (which also uses friction and shear forces at the base of each component). This reduces the g forces in a vehicle crashing into the barrier. Our barriers may be used as permanent or temporary.

They are designed as flexible barriers and are permanently deformed upon impact. This product line includes single- or double-sided barriers with a height of 1,200 mm. These barriers are a road restraint system as defined in ČSN EN 1317-1 and TKP Chapter 11. 1,200 mm-high concrete barriers are currently the best-quality and most-efficient road restraint system. They are functionally classified as H4, which is the highest restraint level according to ČSN EN 1317-2.



Technical Product Data	Nominal dimensions mm			Weight kg/pcs
	Height	Length	Width	
Double-sided basic unit	1200	4000	695	3587
Double-sided short unit	1200	2000	695	1790
Double-sided end piece - left/right	1200	4000	695	2707
Double-sided transition piece left (concrete/steel)	1200	4000	695	3520
Double-sided transition piece right (concrete/steel)	1200	4000	695	3520
Double-sided transition piece left (high to 1 m)	1000-1200	4000	695	3380
Double-sided transition piece right (high to 1 m)	1200-1000	4000	695	3380
Single-sided basic unit	1200	4000	549	3350
Single-sided short unit	1200	2000	549	1672
Single-sided end piece - left/right	1200	4000	549	2477
Single-sided transition piece left (concrete/steel)	1200	4000	549	3280
Single-sided transition piece right (concrete/steel)	1200	4000	549	3280
Single-sided transition piece left (high to 1 m)	1000-1200	4000	549	3143
Single-sided transition piece right (high to 1 m)	1200-1000	4000	549	3143
Handrail for Jersey barrier	500	3890	-	17,5

Joint cover:



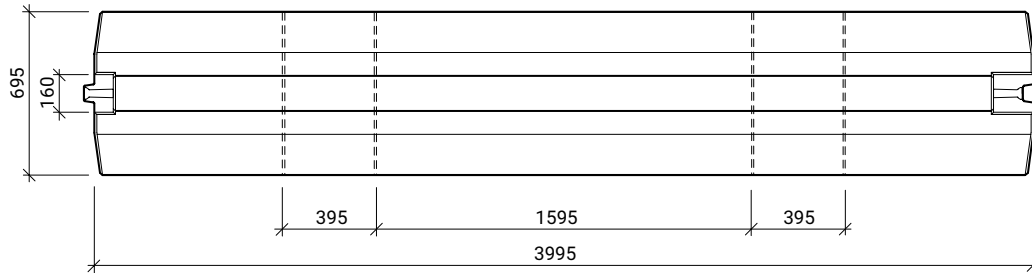
TECHNICAL LIST (HSO2)

ROAD BARRIER 120 DOUBLE - SIDED

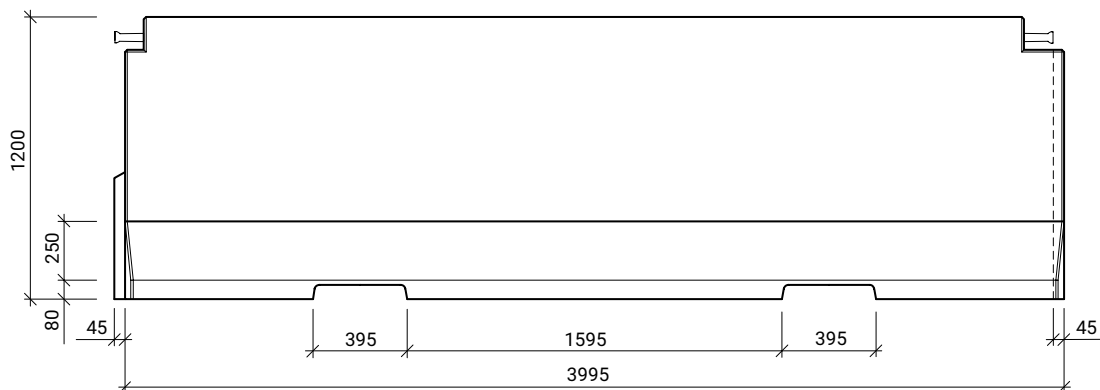
Nominal dimensions - basic shapes:

Basic segment

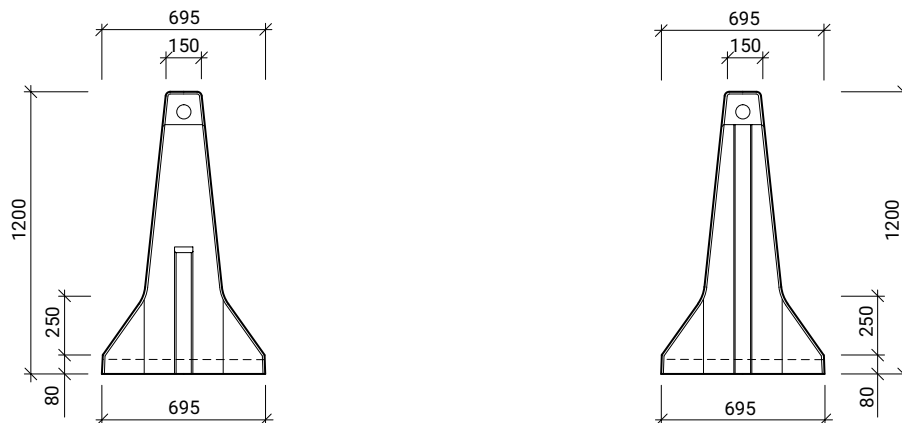
Plan



Front-view



Side-view



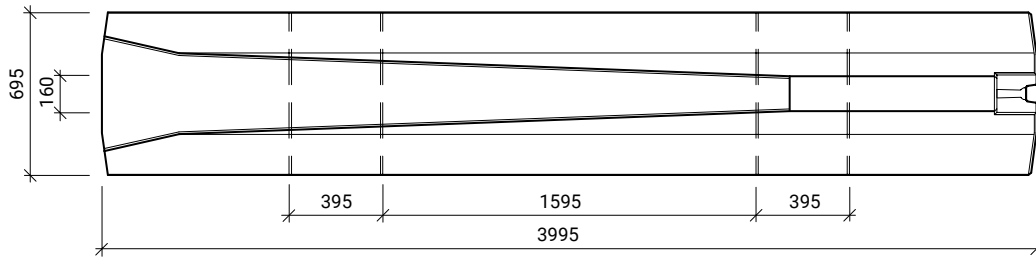
TECHNICAL LIST (HS02)

ROAD BARRIER 120 DOUBLE - SIDED

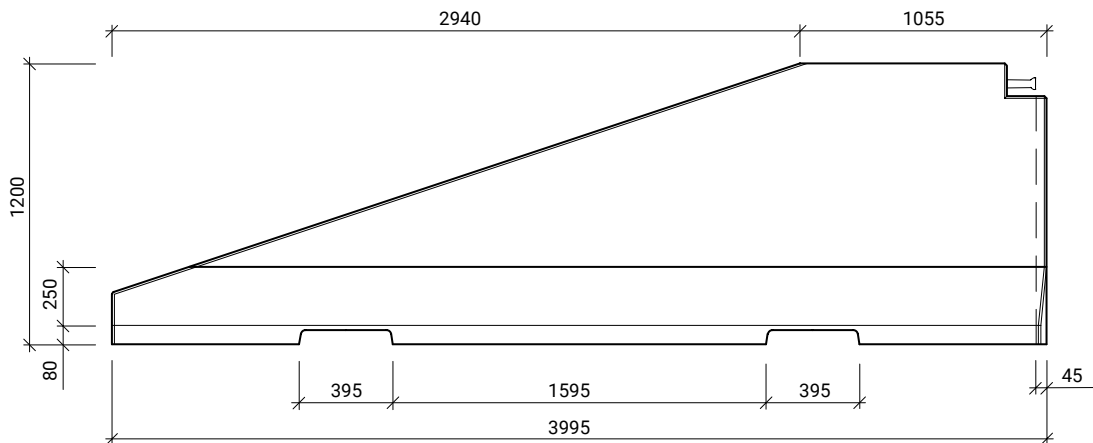
Nominal dimensions - basic shapes:

End segments - right

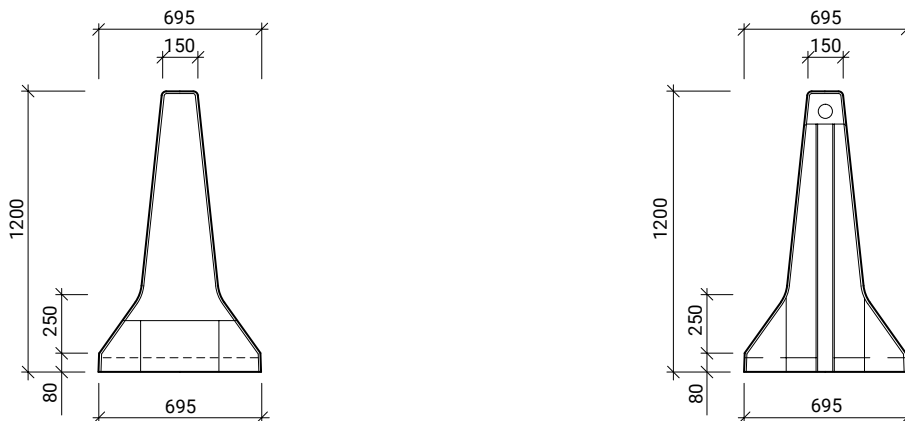
Plan



Front-view



Side-view



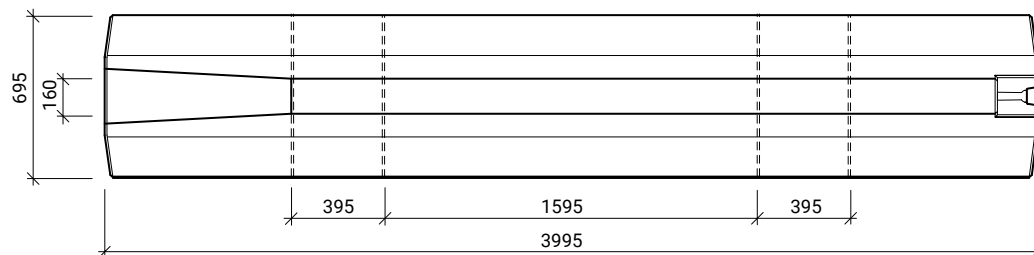
TECHNICAL LIST (HS02)

ROAD BARRIER 120 DOUBLE - SIDED

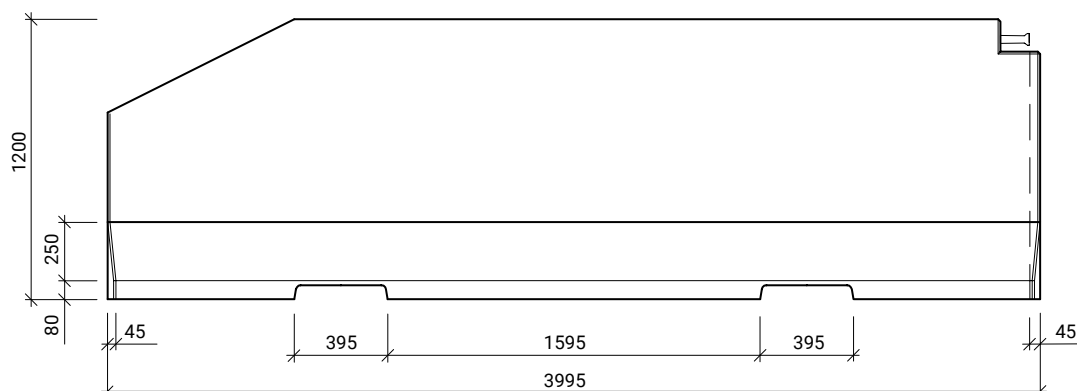
Nominal dimensions - basic shapes:

Transition piece (concrete/steel - right)

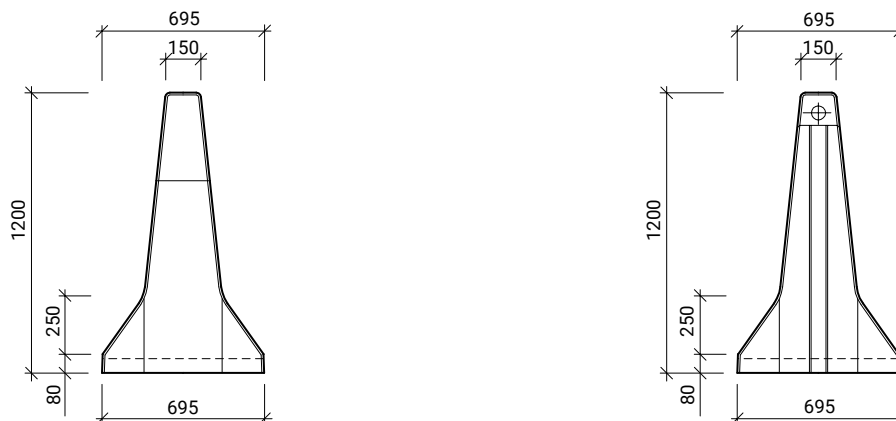
Plan



Front-view



Side-view



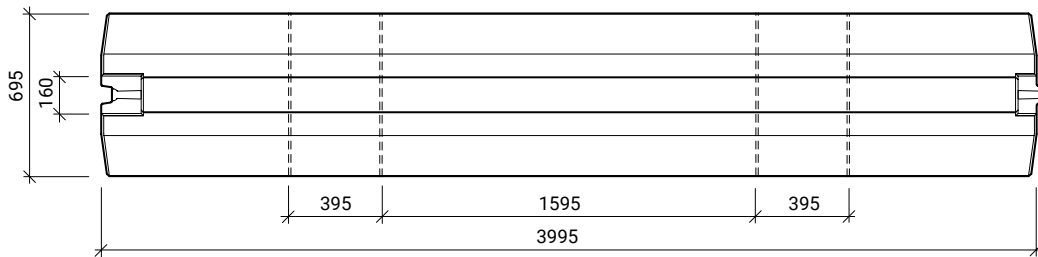
TECHNICAL LIST (HSO2)

ROAD BARRIER 120 DOUBLE - SIDED

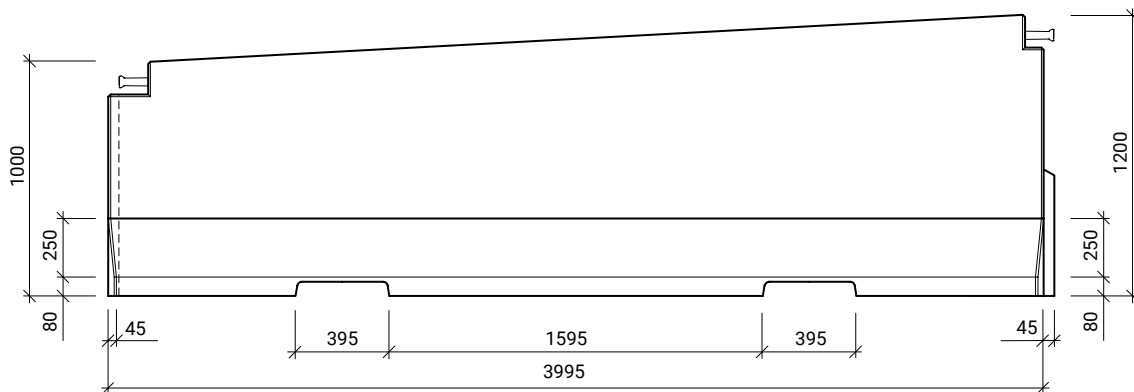
Nominal dimensions - basic shapes:

Transition piece left (high to 1 m)

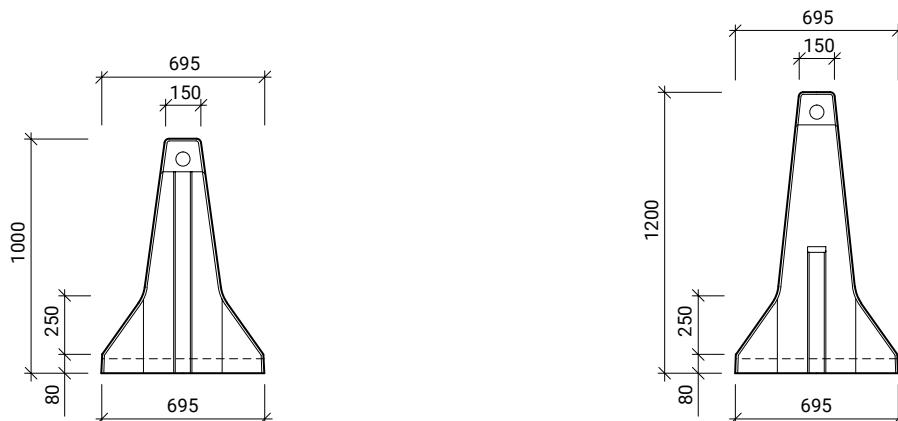
Plan



Front-view



Side-view



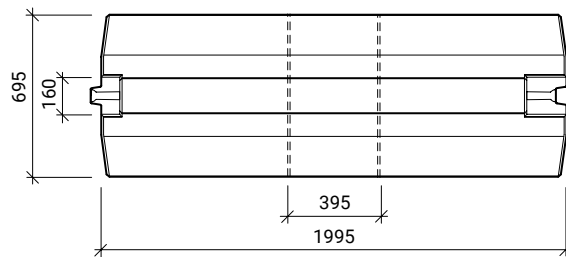
TECHNICAL LIST (HSO2)

ROAD BARRIER 120 DOUBLE - SIDED

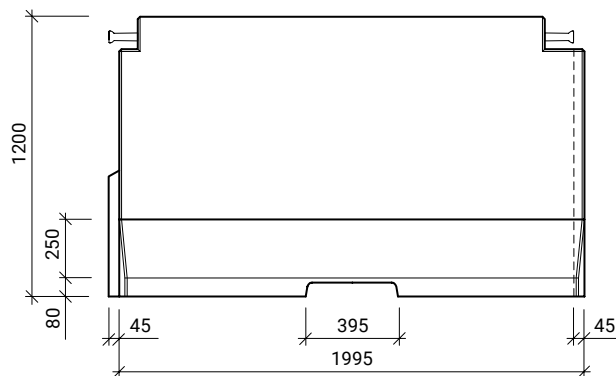
Nominal dimensions - basic shapes:

Short unit

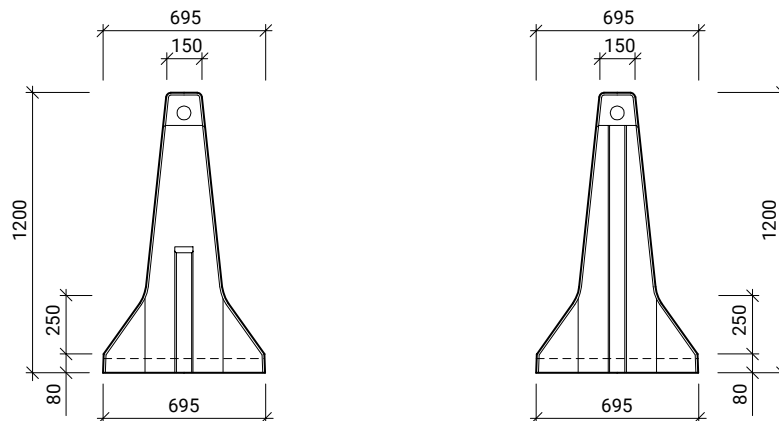
Plan



Front-view



Side-view



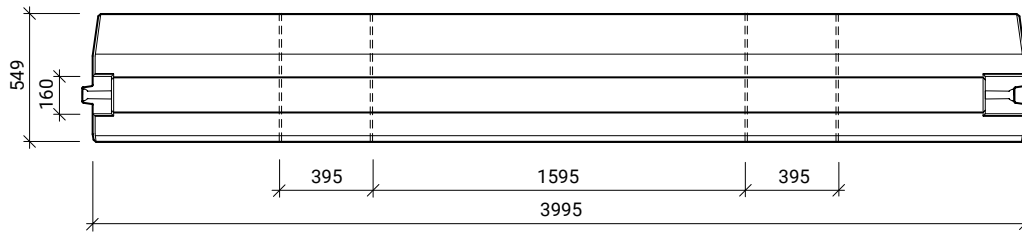
TECHNICAL LIST (HS03)

ROAD BARRIER 120 SINGLE - SIDE

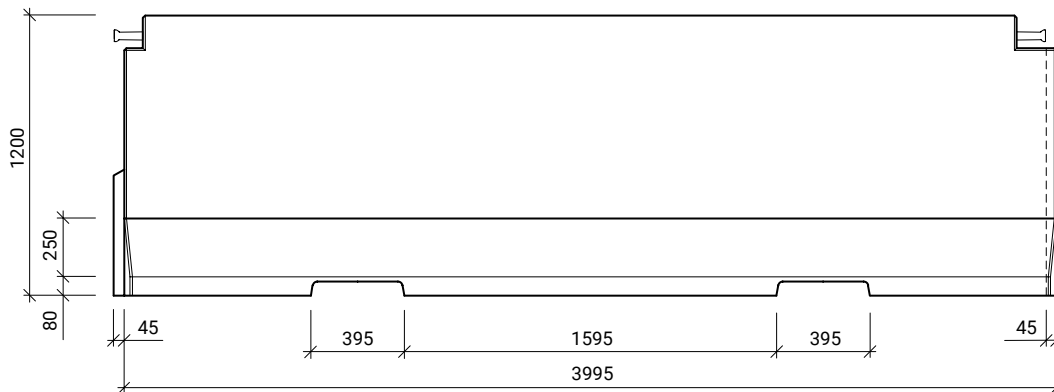
Nominal dimensions - basic shapes:

Basic segment

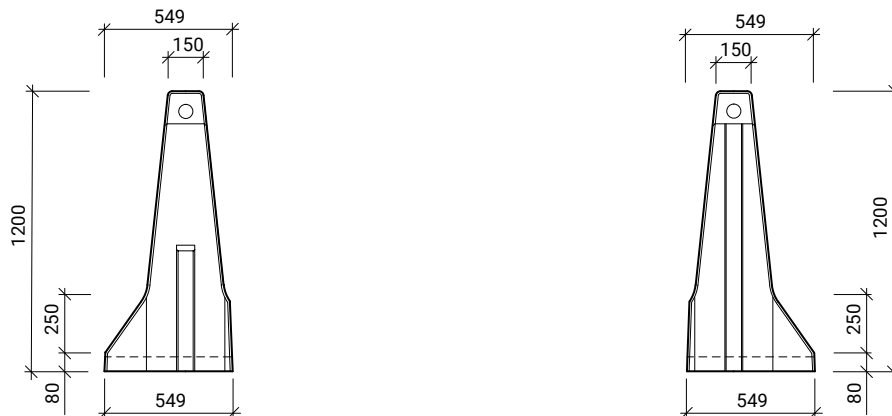
Plan



Front-view



Side-view



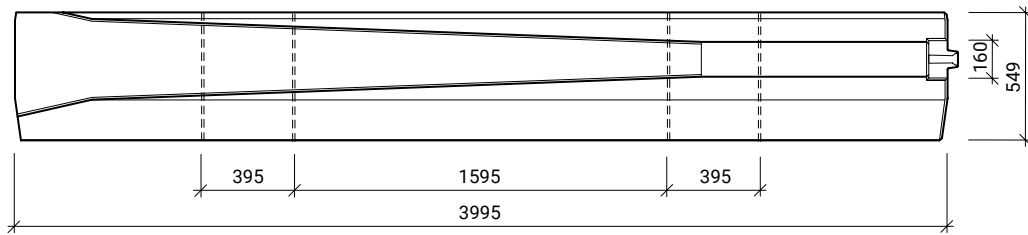
TECHNICAL LIST (HS03)

ROAD BARRIER 120 SINGLE - SIDE

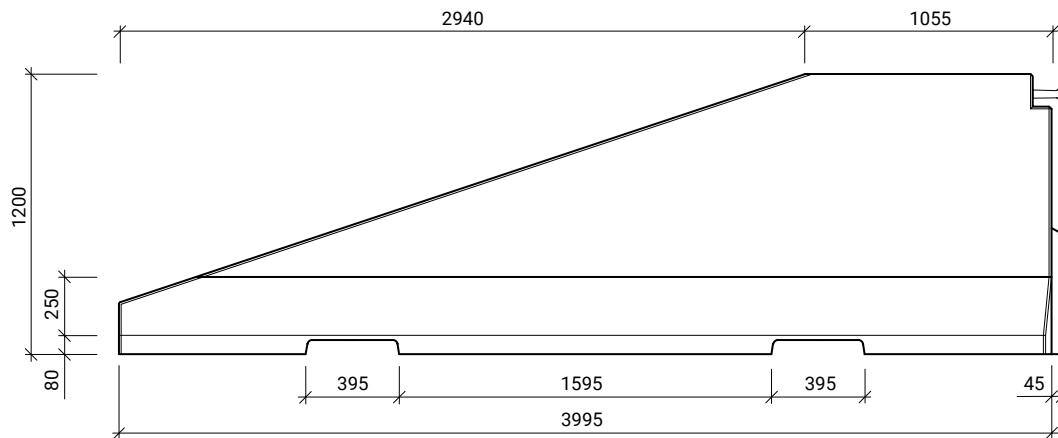
Nominal dimensions - basic shapes:

End segments - left

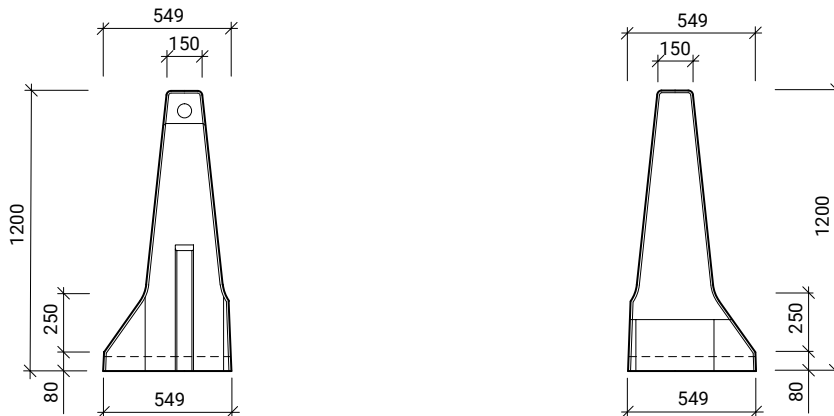
Plan



Front-view



Side-view



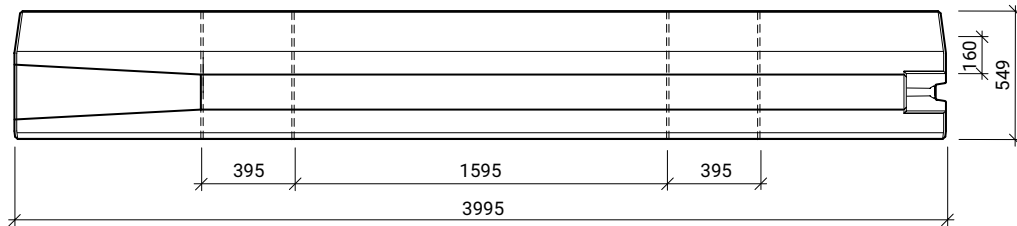
TECHNICAL LIST (HS03)

ROAD BARRIER 120 SINGLE - SIDE

Nominal dimensions - basic shapes:

Transition piece (concrete/steel - right)

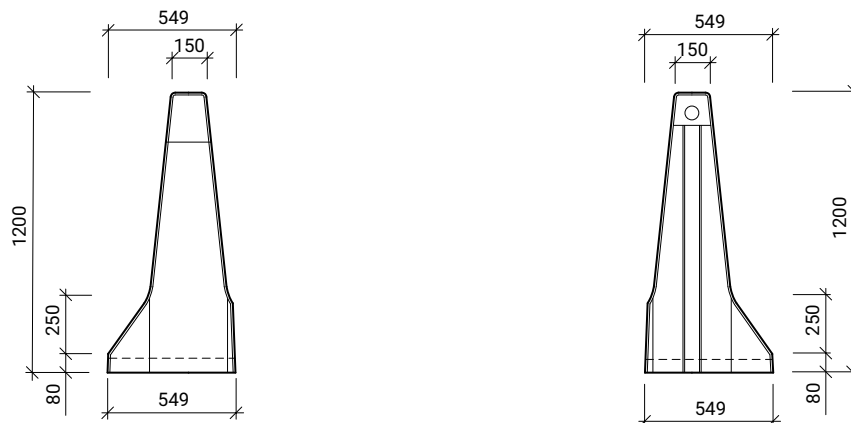
Plan



Front-view



Side-view



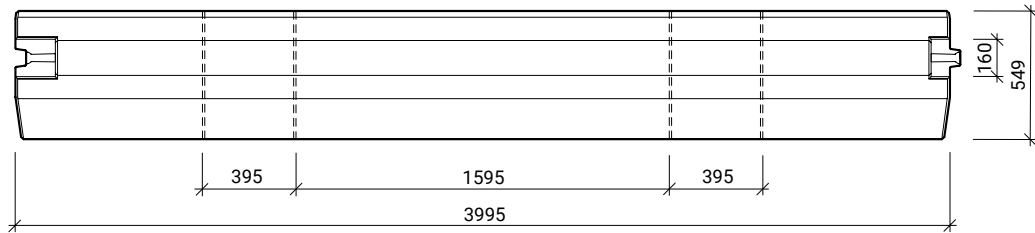
TECHNICAL LIST (HS03)

ROAD BARRIER 120 SINGLE - SIDE

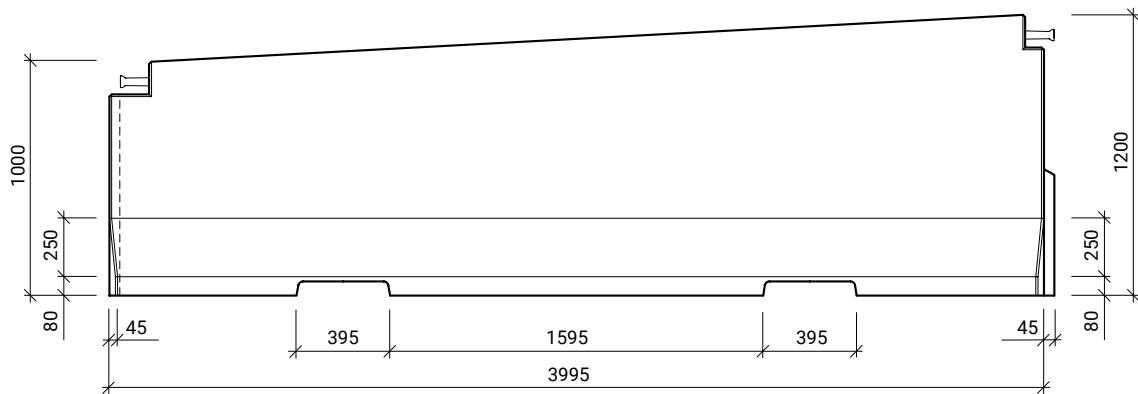
Nominal dimensions - basic shapes:

Transition piece left (high to 1 m)

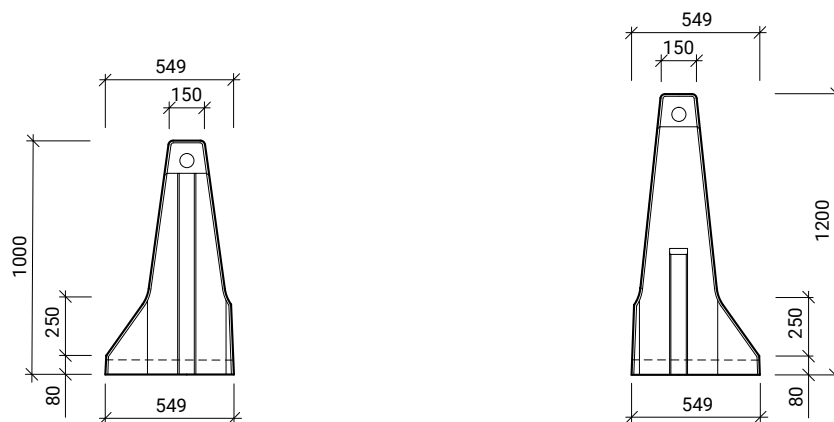
Plan



Front-view



Side-view



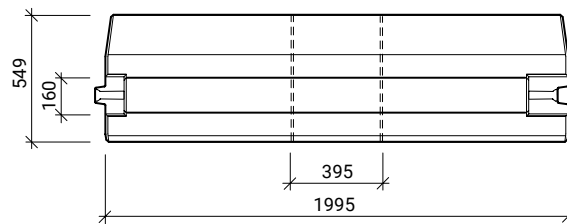
TECHNICAL LIST (HS03)

ROAD BARRIER 120 SINGLE - SIDE

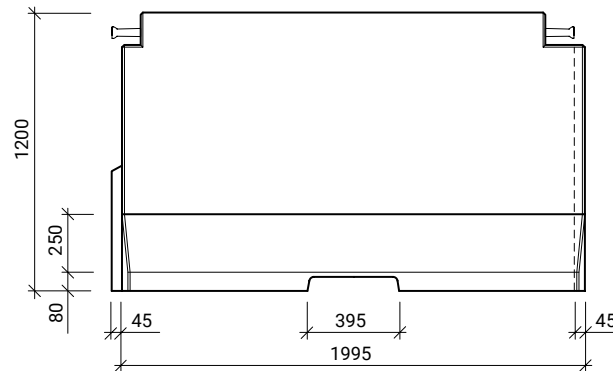
Nominal dimensions - basic shapes:

Short unit

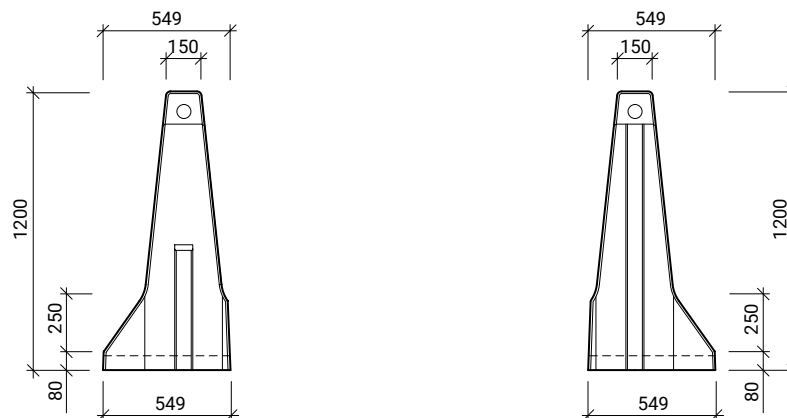
Plan



Front-view



Side-view



TECHNICAL LIST (HS02/HS03)

ROAD BARRIER 120

PROPERTIES AND CHARACTERISTICS

Road barriers 120 are a modern and highly efficient way of controlling traffic and preventing vehicles from entering the opposite lanes, or leaving the road.

CS-BETON produces the following road barriers 120 components:

- Basic road barrier, 4 m long
- End piece, 4 m long
- Transition piece (steel/concrete), 4 m long
- Transition piece left (high to 1 m), 4 m long
- Additional segments, left or right versions.

Our barriers may be used as permanent or temporary. They are designed as flexible barriers and are permanently deformed upon impact. This product line includes single or double-sided barriers with a height of 1,200 mm. These barriers are a road restraint system as defined in ČSN EN 1317-1 and TKP Chapter 11. 1,200 mm-high concrete barriers are currently the best-quality and most-efficient road restraint system. They are functionally classified as H4, which is the highest restraint level according to ČSN EN 1317-2.

Road barrier systems consist of individual prefabricated components, connected by patented articulated joints into a transversal load-bearing catenary (which also uses friction and shear forces at the base of each component). This reduces the g forces in a vehicle crashing into the barrier.

The Road barrier system consists of elements of the same basic cross-section as other conventional road barrier systems. Its other details, however, are radically different. The system uses a number of new and revolutionary solutions, which eliminate the drawbacks of other current systems:

A new and patented articulated bolted joint is used to connect the segments. It allows both longitudinal and directional rectification while maintaining full strength. Its unique feature is simple removal and replacement of destroyed barrier segments.

The reinforcement in each segment ensures its integrity even after it is damaged by an impact. The reinforcement includes plastic fibres, which prevent volume cracks from appearing on the surface of the segment and also limit chipping away of concrete under destruction.

The road barriers are made of high-strength aerated concrete with an admixture of non-crystalline silicon oxide, which creates an augmented crystal lattice to provide superior resistance to frost and defrosting agents. Our concrete parameters are significantly better than those required for the C40/50 class concrete and is resistant to XC4, XD3, XF4 and XA1 environments as per ČSN EN 206-1. This is in line with the requirements provided in Chapter 18 of the TKP documents.

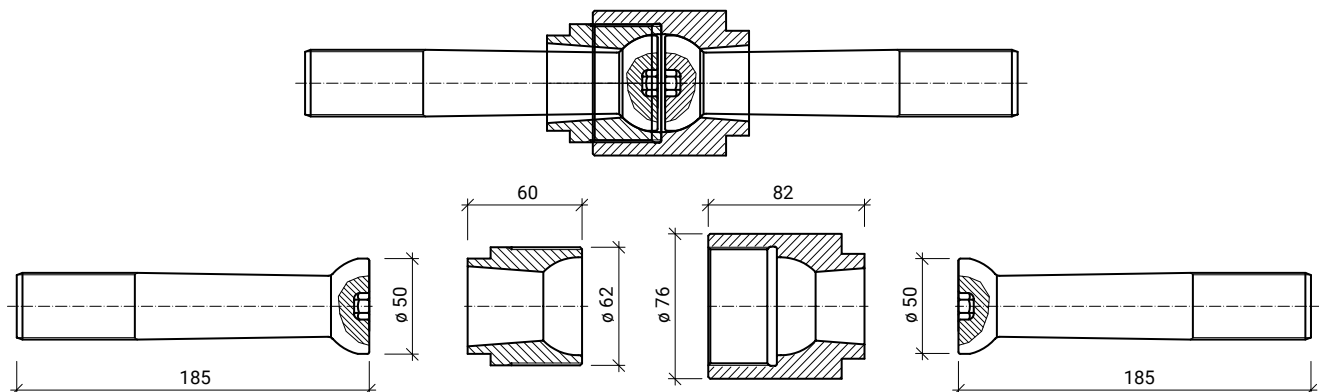
The concrete mix is made with a low-alkali cement, which prevents alkaline-silica reactions.

The articulated bolted joint includes a proprietary DELTA PROTECT surface treatment, which ensures easy dismantling even after years of exposure to aggressive environments. The joints are also protected with plastic covers, which are not subject to theft of metal components.

The Road barrier systems is suitable for separation of vehicles on motorways and other roads with a requirement for road restraint systems. They are classified as H4a and H4b restraints and are thus suitable for all the applications listed below.

The unique rectifiable ball joint enables the barriers to be installed with up to 8° degree angle in each joint without an impact on the static performance of the connection. Unlike other barrier systems, Road barriers 120 may be installed in both vertical and horizontal arcs (the latter with a maximum angle of 4°).

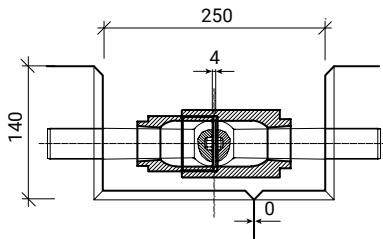
Joint - shop drawing:



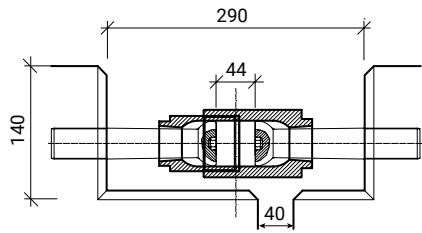
TECHNICAL LIST (HS03)

ROAD BARRIER 120 SINGLE - SIDE

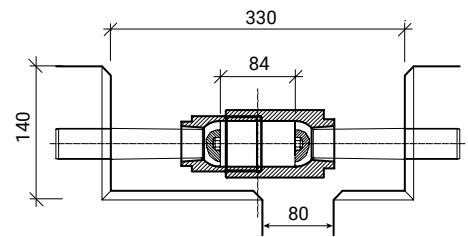
Expansion joint 0 mm



Expansion joint 80 mm



Expansion joint 40 mm



Nominal dimensions - basic shapes:

